LAWRENCE BERKELEY NATIONAL LABORATORY
PERFORMANCE-BASED EMS

VALIDATION AUDIT REPORT

ISO 14001 ENVIRONMENTAL MANAGEMENT SYSTEM
REGISTRATION PROGRAM

NSF-ISR

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Organization: Lawrence Berkeley National Laboratory

Facility No.: To be assigned

Audit: September 14, 15 & 16, 2005

Total Pages in this Report: 46

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ATTACHMENTS:

REPORT DISTRIBUTION:

Lawrence Berkeley National Laboratory
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A. INTRODUCTION

Company:	Lawrence Berkeley National Laboratory ["Facility"]
Location(s):	1 Cyclotron Road, Berkeley, CA 94720 and associated sites in the Berkeley and San Francisco East Bay areas.
Number of Employees:	4000 approximately
Standard:	Performance-Based Environmental Management System Plan (August 2005, Revision 2)
Scope:	The Performance-Based Environmental Management System Plan, dated August 2005, Revision 2, as applied at Facility's 1 Cyclotron Road and associated locations in the Berkeley and San Francisco East Bay areas, California.
EMS Manual:	August 2005, Revision 2
Audit Dates:	September 14, 15 & 16, 2005
Date of Report:	September 20, 2005
Audit Team:	Willem Lamers

A third-party validation audit was conducted by NSF-ISR, Ltd. at Facility in Berkeley, California, on September 14, 15 and 16, 2005 to sample Facility's environmental management system ["EMS"] and to verify through objective evidence, i.e., interviews, procedures, records, work instructions, etc., that an EMS has been developed, documented and effectively implemented.

The contents of this report are confidential and are governed by the provisions for confidentiality, which are described in NSF-ISR Policies for Environmental Management System Registration.

The audit was performed by: Willem Lamers - EMS Lead Auditor, NSF-ISR, Ltd.

Primary Facility escort was: Ron Pauer - EMS Core Team Leader and Group Leader for Environmental Services.

Others participated in the audit as indicated in the audit notes.

Facility is an organization that was founded by Ernest O. Lawrence on the Berkeley campus of the University of California in 1931. The University, currently, as in the past sixty years, holds the Facility management contract. Facility is one of the U.S. Department of Energy national laboratories. The various sections or institutes of the laboratory conduct research in a number of fields, including, fundamental physics, advanced materials and chemistry, biosciences and health, advanced computing, energy conservation technologies and earth and environmental studies amongst others. It employs some 4000 people and is located on an extensive "campus" which includes, apart from the research laboratories, such support buildings and staff as engineering and maintenance, waste handling and certain contracted services as varied as a cafeteria and a fire department. There is close cooperation with the University of California at Berkeley, in that many of the laboratory scientists are faculty members at that university, (as well as at UC San Francisco), and many graduate students work with the lab in a number of its programs. Facility also receives many visitors who perform work in its laboratories.

The validation audit followed a detailed review of the facility's EMS conducted on September 11, 2005, which included a review of facility EMS documentation as displayed on facility's web page http://www.lbl.gov/ehs/esg/emsplan/emsplan.htm. Eleven open issues existed at the time of the validation audit. All were closed during this audit.

An Opening Meeting was held with the EMS Core Team Leader on September 14, 2005 (See Attachment 4). The tentative audit schedule (See Attachment 1) and the audit process were discussed during this meeting, as were other details relating to the manner in which an NSF-ISR audit is conducted. (See Attachment 4).
The validation audit was conducted against the requirements established in Facility's Performance-Based EMS Plan and related documents. One of the documents with particular relevance is the Integrated Environment, Health & Safety Management Plan, May 2004, Revision 3 ("ISM") which serves as the umbrella under which the EMS is operated.

The ISM is currently being updated with approval expected sometime in Fiscal Year 2006.

Components of an EMS originally existed under the Facility's ISM. After performing a gap analysis in September 2002, Facility selected specific elements from the ISO 14001 Standard ("ISO") that it felt would be helpful and add value to its EMS and help reach its goals, which are: (1) Compliance with all applicable environmental protection and public health (including "safety") requirements, (2) Pollution prevention and natural resource conservation and (3) Continual improvement of Facility's environmental performance.

This approach was reported to the Department of Energy ("DOE") in the form of an Action Plan and became part of Facility's contract performance (source: David McGraw interview). The on-site DOE environmental engineer, Mr. Carl Schwab, P.E., has observed the workings of the EMS since its inception and confirmed agreement with the approach taken by Facility. Also, the approach appears to be sanctioned by the Implementation Guide for Use with DOE Order 450.1 Environmental Protection Program, which specifies "suggested, non-mandatory approaches for meeting the requirements."

Notwithstanding the fact that many elements of the ISO were not specifically included in the development of the EMS, some are in fact part of Facility's ISM, if not directly as specified in ISO, than at the very least indirectly, through approaches similar to those required by the Standard. As indicated earlier, the ISM is the umbrella that includes the EMS; the latter is based on Plan-Do-Check-Act principles.

At the validation audit, each requirement audited was rated separately as "acceptable," "having minor non-conformance(s)," or "having major non-conformance(s)." The following is the definition guideline for rating non-conformance:

- **Major:** One or more numbered requirements have not been addressed and/or implemented. A number of minor non-conformances against one requirement can represent a total breakdown of the system and thus can be considered a major non-conformance.

  Minor: A single observed non-conformance to the requirements or the Client's EMS.

Minor non-conformances shall generally not be a reason to withhold validation unless, in the judgment of the audit team, the minors are so numerous that it represents a breakdown of Facility's EMS.

Based on the results of the requirement ratings, the audit team will make one of the following three recommendations to NSF-ISR Management:

Recommendation for Validation

There is no major non-conformance.

Recommendation for Validation Following Verification of Corrective Action

There are one or more non-conformance(s) that, in the judgment of the lead auditor, can be corrected by the Facility and verified by an auditor without a full re-audit.

Recommendation for On-site Reassessment

There are several major non-conformances that represent a breakdown of the Facility's EMS. Another full on-site audit is required.

B. SUMMARY

A sampling of the Client's EMS was undertaken by the lead auditor on September 14, 15 and 16, 2005.

During the course of the audit, the auditor noted the following positive attributes:

- Very strong Management support for the EMS and associated EMPs and procedures;
- The Core Team appears dedicated to the EMS and is very knowledgeable about the system;
- The EMS approach is simple, yet thorough, and shows generally good implementation;
- Excellent process of environmental aspect / impact analysis and evaluation of significance;
- Detailed follow up on EMPs.

Opportunities for improvement exist in the areas of document control, communication, training, application of metrics, management review and root cause analysis of findings.

A closing meeting was held with Management and invitees on September 16, 2005 (see Attachment 4). Audit results were summarized.

C. AUDIT COMMENTS

[1] Establishing the EMS Implementation Team. (Interview with Mr. Pauer.)

This element was found to be **acceptable**.

Reviewed were EH&S Procedure 271, Revision 2 (8/01/2005),
EMS Core Team Roster, and
Core Team Meeting Minutes.

The procedure outlines the establishment and activities of the EMS Core Team that is responsible for designing, implementing and maintaining the EMS. As prescribed by the procedure, the Core Team does include "primary" representatives of EH&S, Environmental Services, EH&S Waste Management, Facilities Design and Construction, Facilities Planning and Procurement. "Back up" members have been designated for each Core Team Participant.

Minutes for meetings held on 4/18/2005, 6/10/2005 and 8/2/2005 were reviewed. They show good discussion of the subjects called for in the procedure. Meetings typically deal with specialized subjects and include training opportunities.

[2] Identification of Significant Environmental Aspects and Impact. (Interviews with Mr. Pauer and Dr. Li Yang Chang.)

This element was found to be **acceptable**.

Reviewed were EH&S Procedure 272, Revision 2 (8/01/2005), and
Aspects/Impacts Inventory and Significance Determination, (August 2, 2005).

The procedure assigns responsibility for aspect determination and significance analysis to the Core Team Leader and to Core Team Participants. The environmental aspects are reviewed annually and comprise those directly encountered in the Facility as well as those that Facility can influence, such as transportation. Most recently the review was conducted in July and published in August 2005.

Aspects are classified in a variety of categories, including Waste generation and recycling, Emissions and discharges, Materials/Resources use and Land/Building development & use.

Significance is based on a number of factors, as outlined in the procedure. Included, e.g., are such factors as severity of impact, duration of impact, probability of impact and others. Values are assessed and rated on a scale from 1 through 3. There is no numerical value that determines significance per se; value constitutes a starting point only. Final selection of the significance rating is based on discussion and professional judgment on the part of the Core Team Participants. Dr. Chang specifically commented on the role of significant aspects in the development of EMPs 04-03D and 04-02A.

The process appears detailed and reproducible.

[3] Environmental Management Programs. (Interviews with Messrs. Ron Pauer, John Speros, Li Yang Chang, Mike Dong, Stephen Black, Bill Llewellyn, Rich McClure and Ms. Susan Nolan and Ms. Nancy Rothermich.)

This element was found to be **acceptable** but generated one Opportunity for Improvement.

Reviewed were EH&S Procedure 273, Revision 2 (8/01/2005),
EMS Fact Sheet No. 2 [LBNL Environmental Management Program ("EMP") Summary dated 7/20/2005], and
EMPs 04-01A, 04-04A, 04-05C, and 04-07A (all ongoing), as well as EMPs 04-02A, 04-03D and 04-06C (all closed.)

The Core Team Leader and the Core Team discuss and develop EMPs that are essentially based on significant environmental aspects, though not exclusively so. Review of the EMPs is frequent, especially at the Core Team Meeting level as well as by the Core Team Leader individually. Sampled Meeting Minutes of April 4, June 10 and August 2 all reflect discussion and review. The EMPs are the planning tools, and reflect the steps to be taken to reach Facility's Objectives and Targets. These objectives are categorized as Control and Maintenance, Improvements or Study/Investigation type objectives and targets.

The format is quite detailed and lists, amongst others, the objective, the person responsible for the EMP, as well as frequently a back up or co-responsible person, a strategy summary, actions to be taken with due date and completion dates, metrics and may include a program schedule.

EMS Fact Sheet No. 2 provides a summary of EMP Objectives and Accomplishments, as well as a status report on each EMP.

Discussion with the responsible persons and backups show detailed knowledge of the EMPs, and an excellent follow up system. With few exceptions completion deadlines were met.

Tested were the following EMPs:

04-06C – (Facilities – Design and Construction) Action item 1 was completed as required and Metrics item 1 was available.

Mr. Dong anticipates that two new EMPs will be presented to the Core Team Leader sometime in October.

04-03D – (Waste Management and Procurement) Action item 1 was available (Study Report for 2005 Computer Take Back 3-30-2005) as was Metric No. 2, (Computer Property Flow Chart), as presented in above captioned report.

04-02A - (Waste Management) Action item 3 was tested and found as described in Memo to EMS Core Team, dated 3/30/05. Metrics 1 and 5 were noted in the Metric section of the EMP.

04-05C - (Procurement) This EMP was revised on 9/9/05 to include new approaches. Tested were action item 9 (See PeopleSoft Recycling Usage Reports 10-01-2004 and 8-20-2005.)

Also tested were Metric 2 (Not available as explained by Mr. Speros) and Metric 4. The latter was given in dollars, rather than in percentages as required by the EMP. This was supposedly done because the DOE required this method of feedback.

Opportunity for Improvement No. 1: Metrics should be provided as specified or, if not relevant, the Metric required should be correctly identified.

A brief conversation with Ms. Emma Mims shows that she is aware of the green buying policy. She normally uses a catalogue rather than the electronic version of the buying program. Ms. Mims confirmed the “Green Buying” training program offered to buyers recently.

04-07A - (Facilities Commute Traffic). This EMP was updated September 15, 2005. A first draft trip reduction strategy working draft, a review of the bus shuttle program (January 2005) and an Executive Summary of the Review of the Bus Shuttle Program (Jan. 2005) show the EMP to be on track.

[4] Training. (Interview with Ron Pauer,Yoshinori Kohwi and Tony Linard.)

This element was found to be **acceptable,** although one Opportunity for Improvement was generated.

Reviewed were EH&S Procedure 274, Revision 2, (8/01/2005),
Training materials presented at Management Review Meeting, and CEEM Training Manual for ISO 14000.

One training session was given to upper echelon management involved with the EMS, and a refresher dealing with ISO 14001 and associated materials was given during the June 30 Management Review session.

Core Team Participants were given one basic training session on broad principles and subsequently received training during the periodic Core Team meetings. The latter training is focused on the subject of discussion, such as, environmental aspect analysis, setting objectives and targets and preparing EMPs.

Attendance is noted in the Meeting Minutes.

The Core Team Leader took a three-day program on ISO 14000 offered by CEEM, which course included basics on the ISO 14000 series and environmental management systems, including some audit training.

Training to date has been very focused and essentially included only management involved with the EMS Core Team Participants and certain LBNL staff important to the effective implementation of the EMS, e.g. Procurement Buyers. (Source: Interviews with Messrs. Hammer, Chen, and Speros)

In their interviews, Dr. Kowhi and Mr. Linard highlighted how they are involved in required training of students and workers in their respective areas of responsibility.

Opportunity for Improvement No 2: Facility's EMS would be strengthened by offering more formal training on the basic EMS to the entire LBNL work force.

[5] EMS Assessments and Audits. (Interview with Mr. John Chernowski and Mr. Ron Pauer.)

This element was found to be **acceptable.**

Reviewed were EH&S Procedure 275, Revision 2 (8/01/2005),
Internal Audit of the LBNL Performance-Based Environmental Management System, (July 2005), and
the electronic version of the Berkeley Lab Self-Assessment Program, Revision 3, (February 2002)

The procedure calls for an internal audit on an annual basis. Mr. Chernowski, Manager of the Office of Contract Assurance, who is an externally trained auditor for ISO 14001 (Excel Partnership, Inc. training course), performed the audit. The audit protocol established in the procedure was followed. Results were discussed in a closing meeting and copies of the report were sent to members of the Management Review Group and Core Team Participants.

Findings were put in the LCAT system and follow up was concluded with actual end dates noted well short of the sixty day period allowed for corrective action to have taken place.

[6] Management Review. (Interview with Mr. McGraw, Ms. Pei, and Mr. Pauer.)

This element was found to be **acceptable** however two Opportunities for Improvement were generated.

Reviewed were EH&S Procedure 276, Revision 1 (4/14/2005),
Management Review Meeting Minutes of June 30, 2005, and
Follow up meeting notes July 18, 2005 and July 29, 2005.
Additionally Ms. Pei and Mr. McGraw were queried extensively about their roles in the Management Review process.

The procedure calls for an annual Management Review. This meeting was held on June 30, 2005. Minutes were recorded as required. Present were two of four executives as well as a number of Core Team Participants. (Absent notably were Messrs. McGraw and Fernandez, who did however receive copies of the Minutes and who were also personally briefed by Mr. Pauer on July 29 and July 18, respectively.)

The procedure specifies a number of subjects to be discussed under a “such as” classification. Of these subjects there was discussion of aspects and impacts identification

and significant aspects, status of EMPs, a summary of key issues, actions arising from the meeting and, at a later date, i.e., July 26, the result of the internal audit as this result was not available at the time of the Management Review.

As required, a portion of the meeting was dedicated to EMS awareness training refresher.

Not included in the review were suggested items such as environmental policy (note: there is no EMS environmental policy; the latter is part of the Integrated Safety Management Policy), corrective action, adequacy and effectiveness of training program. As this was the first review meeting there were no action results from prior management reviews

On the basis of interviews with Mr. McGraw (Chief Operating Officer and Associate Laboratory Director) and Ms. Pei (Division Director Environment, Health and Safety), it is clear that the Management is well aware of the status of the program and supports it strongly. Feedback on this status is frequently given through formal or informal contacts with Mr. Pauer, the Core Team Leader.

Opportunity for Improvement No. 3: Facility's Management Review process might be strengthened if all of top management with duties for review actually attended and participated in discussions at the same Annual Management Review meeting.

Opportunity for Improvement No. 4: Facility's Management Review process would be strengthened by inclusion of all subjects currently suggested under the "such as" clause in the annual review meeting

[7] Integrated Safety Management ("ISM") System. (Interview with Mr. Pauer, Ms. Pei, Mr. McGraw, Dr. Yoshinori Kowhi and Mr. Tony Linard.)

Integration was found to be at an **acceptable** level, however three Opportunities for Improvement were generated.

Reviewed was the Integrated Environment, Health & Safety Management Plan, (May 2004, Revision 3). The latter is in the process of being updated and it is expected that the new revision will be approved in Fiscal Year 2006.

This document forms the umbrella under which the EMS is operated. Certain ISO elements were not included in that EMS but some of them are touched on in the ISM.

Specifically not included in the EMS as named components are: 4.1 General Requirements, 4.2 Environmental Policy, 4.3.2 Legal and Other Requirements, 4.4.1 Resources, Roles, Responsibility and Authority, 4.4.3 Communication,

4.4.4 Documentation, 4.4.5 Control of Documents, 4.4.6 Operational Control, 4.4.7 Emergency Preparedness and Response, 4.5.1 Monitoring and Measurement, 4.5.2 Evaluation of Compliance, 4.5.3 Nonconformity, Corrective Action and Preventive Action and 4.5.4 Control of Records. Yet many of these elements (though not all) are touched on in the ISM , if not necessarily in the detailed manner specified in ISO.

Where present in the ISM, or in other documentation used by facility, they are noted below. Some elements are absent from the ISM as well:

(a) Environmental Policy: Part of the Integrated Safety Management Policy of the Ernest Orlando Lawrence Berkeley National Laboratory which, a. o., specifies that the Laboratory's policy is to prevent any harm to the environment. (Note: The three commitments typically found in an ISO-type EMS are part of the Goals specified in the EMS.)

(b) Legal and Other Requirements: These are found in "Work Smart Standards (WSS) Set." The document indicates a listing of laws or regulations applicable to the Berkeley laboratory and was last updated 2/03/2005. Other requirements are referred to in the ISM in general terms.

(c) Responsibilities and Authorities: Responsibilities for individuals and teams are clearly specified in individual EMS procedures. Responsibilities and competencies and experience are also specified in position descriptions. Sampled was the position description for the Environmental Services Group Leader; the responsibility for managing the EMS was clearly specified.

The ISM also places a burden on the Principal Investigators ("PI") who must ensure that personnel in the laboratory for which a PI has responsibility are trained in safety and environmental rules. In an interview with Dr. Kowhi and Mr. Linard they explained how this is handled in the Life Sciences section for which they have responsibility. The process involves a series of formal training sessions (through video or web training), and personal instruction as well as personal observations. PIs are instructed in the requirements as they assume their positions and are kept updated through various publications or meetings.

(d) Communication: This is handled through a variety of means, including work hazard and risk analysis, feedback and improvement programs, planning instructions, handbooks, rules for participating guests and visitors, as well as for students and contractors. There is a strong emphasis on safety in this type

of communication. One thing not communicated to the general LBNL population is the existence of the EMS, although Facility did mention it in its annual environmental reporting.

Opportunity for Improvement No. 5: Facility might benefit from advising the entire staff that it has implemented an EMS.

(e) Documentation. Both the EMS and the ISM have extensive tables of contents, though the ISM is silent, in its index, about the EMS. (Note: it is discussed on page 14 of the Core EH&S Functions section,). This language mentions the ISM program " will be" integrated with the EMS. This is to be corrected in the new version awaiting approval. Practical integration has taken place since inception of the EMS. (Source: Interview with Mr. Pauer)
The scope is generally described as "Lawrence Berkeley National Laboratory."

(f) Control of Documents. Not found in the system. In fact a problem came to the attention of the auditor when during the interview on procurement with Mr. Speros, it appeared that he was working with a paper copy of Procedure 273, Version 1 which is no longer current. It should be noted however that most people indicated during interviews that they work with the electronic system. There is a LBNL document control system (Institutional Guidelines). When discussing the internal audit program with Mr. Chernowski we were unable to bring it up on the screen however as per Mr. Chernowski, the control system was only used in a "fairly informal approach" for purposes of the EMS, as the system is still very young. Section 8.01 of the RPM specifies specific language applicable to document control. It is the Division Director who must identify which documents require "the formal and rigorous control." (Source: e-mail from John Chernowski to Ronald O Pauer 16 Sept., 2005)

Opportunity for Improvement No. 6: Facility's EMS could be strengthened by adding a section dealing with document control. This could include more specific language dealing with records control and retention as well.

(g) Operational control. Though no operational controls are specified in the EMS, there are some operational controls indicated in the ISM in categories of work planning, hazard and risk analysis and work performance. These points were not further reviewed during this audit.

(h) Emergency Response. Though not directly tied to EMS or ISM, Facility does have a number of emergency response procedures that find application also in environmental events. Particularly relevant is the LBNL Emergency Contact Team and the Initial Assessment Team (8-1-05), dealing with reportability, spills, and basic response action.

(i) Monitoring and Measurement. Integrated through a process of self-appraisals and supported by documentation such as "Tools and procedures for EH&S Performance Criteria" which lists expectations and validations using a rating system from satisfactory to marginal. This is an annual requirement. resulting in a Division-Self-Assessment Performance Chart. (Reviewed was the copy for the FY 2004.)

Additionally, environmental performance is carefully monitored and annual reports are published. (Reviewed were the two most recently published, i.e. 2002 and 2003.) EMS performance is also tracked, and strongly so, with respect to EMPs. (See that section.)

In an interview with Mr. Pauer it was learned that though Facility does frequently take its own samples, analysis of those samples is typically performed by outside laboratories which use their own equipment. Therefore, Facility does not maintain its own calibration records

(j) Evaluation of compliance. Covered in the ISM under Core EH&S Functions at the department and division levels as well as project and activity level through feedback and improvement means and self-assessment systems.

(k) Non-conformity, corrective action and preventive action. Though not specifically addressed in the ISM, Facility uses an LCATS Tracking Corrective Action Report, ("Laboratory Corrective Action Tracking") which is part of the Self-Assessment Program previously noted.

Five findings resulting from the internal EMS audit were put into the system. Action on the internal findings was completed within the deadline set. The format does not use root cause analysis as, under current corrective action procedures used at LBNL, this analysis is only used under limited conditions and not in the case of findings at this level which were all classified at the "best practices" level. (See printout of Wednesday, September 14, 2005) In fact during an interview with Mr. Chernowski it was learned that LBNL does not generally apply root cause analysis unless there is a "High Hazard" rating.

Opportunity for Improvement No. 7: Facility's EMS could be strengthened by establishing a non-conformance / corrective & preventive action procedure and format, including root cause analysis.

(l) Control of records. Not specifically included in ISM, however procedures used in the EMS speak to retention of records for an indefinite period of time by the Core Team Leader.
(See OFI No. 5.)

[8] Interview Comments.

A number of interviews were conducted with various levels of Management, members of the Procurement staff, Core Team participants, internal auditor and people responsible for selected EMPs. The purpose of these interviews was, in general terms, to gain an impression of the personal role played by the interviewees, their involvement in and support for the EMS.

Specifically interviewed were:

Mr. David McGraw	Associate Laboratory Director, Operations and Chief Operating Officer
Ms. Phyllis Pei	Director, Environment, Health & Safety Division
Mr. Guy Bear	Deputy Director, Facilities Division
Mr. Stephen Black	Department Head for Operations, Facilities Division (Core Team member)
Mr. Derrol Hammer	Department Head for Procurement, Office of the Chief Financial Officer
Mr. David Chen	Manager, Procurement Department
Ms. Diana Hopper	Buyer, Procurement Department
Mr. John Speros	Manager, Procurement Department (Core Team member)
Ms. Susan Nolan	Buyer, Procurement Department (Core Team member)
Ms. Emma Mims	Buyer, Procurement Department
Mr. Carl Schwab, P.E.	Environmental Engineer, U.S. DOE Berkeley Site Office
Ms. Nancy Rothermich	Group Leader for Waste Management Group, EH&S Division (Core Team member)
Li Yang Chang, Ph.D.	Waste Minimization Coordinator for Waste Management Group, EH&S Division (Core Team member)
Yoshinori Kohwi, Ph.D.	Principal Investigator, Life Sciences Division
Mr. Tony Linard	Facility Manager / Safety Coordinator, Life Sciences Division
Mr. Mike Dong	Chief Mechanical Engineer for Design and Construction Department, Facilities Division (Core Team member)
Mr. Bill Llewellyn	Department Head for Site Services, Facilities Division

Mr. Rich McClure	Planner for Facilities Planning, Facilities Division (Core Team member)
Mr. John Chernowski	Manager, Office of Contract Assurance (Internal EMS Auditor)
Ms. Terry Powell	Community Relations Officer, Public Affairs (Tour only)

Audit notes more fully reflect their comments but on the basis of interviews it became clear that Management strongly supports the EMS and is well aware of the status of the program, including its strengths and weaknesses. Generally it is felt that the program is "robust," adds value and is workable. Additional importance was attached to the EMS because the local community is "listening to what goes on at LBNL."
Management sees as its major roles the providing of resources, the communication of the EMS, being drivers to make the program successful and to keep people involved and committed. Core Team Participants know the system, participate in aspect and impact analysis as well as in determination of significance and in EMPs. Persons responsible for EMPs are thorough in their follow up. Procurement is fully committed to the programs of "Green Buying" and has presented training programs to their Buyers. (Note: Two buyers were interviewed and were familiar with the requirements though one of them, i.e. Ms. Hopper could not immediately access the "green products" section for two selected vendors on the electronic system – she did present a newly developed listing of green paper products.) Specifically it was mentioned by Procurement that the EMS significantly boosted the process of green buying.

D. CONCLUSION

The Validation Audit identified the following:

- Zero (0) Major findings
- Zero (0) Minor finding
- Seven (7) Opportunities for Improvement

Since there were no major or minor findings no corrective action is required. Opportunities for Improvement simply reflect an auditor's opinion that acceptance of these opportunities would strengthen the EMS but do not imply non-conformances and require no action should Facility decide not to accept them.

Based on the results of the 3-day validation audit, the auditor has concluded that the environmental management system at Facility should be:

Recommended for Validation

This report will be submitted to the NSF-ISR, Ltd. Certification Board management for its validation determination.

All findings and reports generated as a result of this audit will remain confidential. (See Attachment 7)

END OF VALIDATION AUDIT REPORT TEXT

Note Attachments and continued page numbers